

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 09/994,516 Confirmation No. : 8536
Applicants : Trung T. Doan and Dean A. Klein
Filed : November 26, 2001 Attorney Docket No.: 500966.01
Art Unit : 2111 Customer No. : 27,076
Examiner : Thomas J. Cleary
Title : MACHINE STATE STORAGE APPARATUS AND METHOD

DECLARATION UNDER 37 C.F.R. § 1.131

Sir:

I, Mark W. Roberts declare the following:

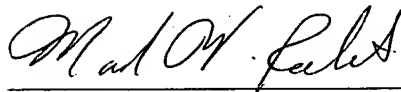
1. I am a registered patent attorney and authorized representative of Micron Technology, the assignee of the present application.
2. The present application stands rejected under § 102(e) over U.S. Pat. Application No. 2003/0005223 by Coulson, which was filed June 27, 2003 and published January 2, 2003. (Coulson).
3. The in-house files for the instant application contain an original disclosure document, designated 01-0193 and submitted herewith as Exhibit A, which was prepared by the inventors Trung Doan and Dean Klein for their Employer and assignee, Micron Technology, for the purpose of preparing and prosecuting the instant invention.
4. Submitted herewith as Exhibit B is a dated note originally attached to disclosure 01-0193, which was signed by the inventors and counter-witnessed by another prior to June 27, 2001, the filing date of Coulson. Also Submitted herewith as Exhibit C is a copy of an Email communication between the inventor D. Klein, and Micron patent counsel, Micahel Lynch. Exhibit B evidences conception of the core elements claimed in the present application before the filing date of Coulson. More particularly, Exhibit B evidences conception of a method to provide an instant on computer by providing a separate memory in the form of a flash PCMLA card to capture all the register and data need for "instant on" of the computer, and in particular, prior ot power cut -off or shut down. Exhibit C further describes the claimed features with reference to its various advantages, and particularly evidences conception of such features as use of a PC card

slot, a Cardbus, transportability between machines, the machine state memory being independent of the internal memory and reading information from the memory.

5. The actual dates on the Exhibits A-C have been redacted, as has information in Exhibit C that is unnecessary to evidence conception of the presently claimed invention. The undersigned certifies, however, that the original documents are dated before June 27, 2001, and that un-redacted documents are present in attorney files for this application.
6. Shortly after conception of the invention, and within less than three weeks, the inventors completed the invention disclosure of Exhibit A, and submitted it to their employer for the purposes of preparing the instant patent application. The invention disclosure was received and dated by the employer, Micron Technology, prior to June 27, 2001. The subsequent information in Exhibit C, which further explained certain aspects of the conceived invention, was also sent to in-house patent counsel prior to June 27, 2001. These acts provide evidence of diligent efforts of the inventors in constructive reduction to practice by submitting the information needed to prepare and file the instant application through proper channels established to accomplish that purpose.
7. Exhibit D, is a letter sent to this office by Micron to outside patent counsel within less than a week of receiving Exhibit C, instructing patent counsel to prepare a patent application based on the submitted disclosure 01-0193. The letter was received by patent counsel prior to the filing date of Coulson. Exhibit D provides evidence of diligence in constructive reduction to practice on the part of Micron Technology prior to the filing date of Coulson.
8. Patent counsel acted on the invention disclosure with customary diligence, which was in chronological order among dozens of other disclosures received on a periodic basis from Micron Technology. Within a customary period, patent counsel interviewed the inventor to obtain further details concerning what was conceived (which details are recited in the claims ultimately submitted with the application). Patent counsel prepared a draft application based on that interview, submitted two drafts to Micron Technology, which in-turn routed the drafts to the inventor for review. The first draft was reviewed by the inventor, revised by patent counsel, reviewed and revised again by the inventor and the final application was filed with the US Patent and Trademark Office within an ordinary and customarily diligent time period for preparing Micron applications in a chronological

order. Exhibits E and F attached herewith, are the first pages of two drafts of the present application that were sent to Micron Technology from patent counsel, providing further evidence in diligence toward constructive reduction to practice on the part of patent counsel. After the two rounds of revision and review, the present application was filed on November 26, 2001.

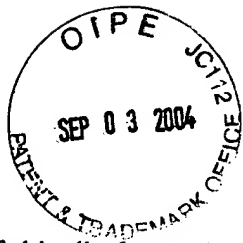
9. The aforementioned statements based on my own knowledge are true and/or are based on information believed by me to be true. I acknowledge that willful false statements and the like are punishable by fine or imprisonment, or both, and may jeopardize the validity of the subject patent application or any patent issuing thereon.



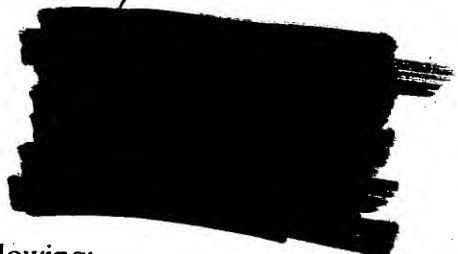
Mark W. Roberts

08.30.04

Date



500966.01



Micron Technology, Inc.
Invention Disclosure

If this disclosure is related to an ARPA project, please check one of the following:

☐ Advanced SRAM ☐ BST ☐ FED ☐ FE RAM ☐ NCAICM

1) **INVENTOR(s):** Trung Doan

01-D193

Dean Klein

If an inventor is NOT employed by Micron identify the inventor and employer:

2) DESCRIPTION OF THE INVENTION:

2.1 Title of Invention:

A method to provide instant-on computer

2.2 Brief Description of Invention:

See attached notes

2.3 Attach a complete description, including drawings or sketches and articles relevant to the invention. Legible photocopies of laboratory notebooks are acceptable.

3) INFORMATION CONCERNING CONCEPTION OF INVENTION:

3.1 Conception and Documentation of the Invention:

a. Identify the date when you first conceived the invention.
(If not sure, give the earliest date of which you are sure)

b. To whom was the idea first described and on what date?
(Other than co-inventor)

c. Identify the date of the first tangible record such as computer simulation, tape out, drawing, or written description. Please type and location.
See note dated 2/23/01

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[REDACTED]

disclosure: a method to provide instant-on computer
it is disclosed that one could mirror a PC memory
content (main memory) to a flash PCMCIA card to capture
all registers + data needed for instant-on; This is done
prior to the power is cut off / system shutdown.

inventor: Timmy Dean [REDACTED]

inventor: Dean Kleir. [REDACTED]

witness: [REDACTED]



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Exhibit B

mikelynych

From: dklein
Sent: [REDACTED]
To: mikelynych
Cc: tdoan
Subject: Disclosure 01-0193

508166-01

Mike, et al,

Regarding this disclosure, allow me to explain how it came about, and to discuss the feasibility.

[REDACTED]
The drawbacks to Darrell's approach are that the Flash devices (even SyncFlash) does not have an interface which is compatible with the memory controller. In the case of a DDR main-memory system, the interfaces are not even electrically compatible.

The use of a PC-card slot has several advantages:

First, it is independent of the internal memory interface.

Second, it allows the user's machine state to be transported between like machines. (A simple machine description header can ensure machine compatibility).

Third, it is fast, with Cardbus operating at over 100MB/sec. A two second load time for a typical machine is a tiny fraction of the load time for a typical hard-drive based resume, where the time to first access to the hard drive is measured in tens of seconds.

Fourth, multiple machine states can easily be retained on multiple cards. This could be very useful to an IS department.

As to the feasibility: Either Darrell's solution or our solution require modification to the power management code in the system BIOS. These changes are easily managed. In our case the suspend code is simply modified to detect the presence of the flash card, and if present, to direct the data to the PC Card controller. On power up, the presence of the card is once again detected and data is restored if present.

Dean

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Micron Technology, Inc.
8000 S. Federal Way
P.O. Box 6
Boise, ID 83707-0006
208.368.4000

[REDACTED]

Edward W. Bulchis
Dorsey & Whitney LLP
US Bank Building Center
1420 5th Avenue, Suite 3400
Seattle, WA 98101

Re: New Disclosures


Dear Ed:

The following disclosures have been assigned to your docket:

Docket #	Priority	Notes
01-0193	Regular	500966.01

Please prepare and file a patent application with the U.S. Patent and Trademark Office on behalf of Micron Technology, Inc. for each. Where possible, please draft system, product and process claims for each. If you have any questions regarding these disclosures or any other disclosures, please feel free to call.

Very truly yours,


Stacy Summers
Patent Assistant

Phone: 208/368-4591
Fax: 208/368-5606

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The future of memory

Exhibit D

APPLICATION
Of
Trung T. Doan and Dean A. Klein
For
UNITED STATES LETTERS PATENT
On
**MACHINE STATE STORAGE APPARATUS AND
METHOD**

Docket No. 500966.01
Client/Matter No. 446602-1269
Disclosure No. 01-0193
4 Sheets of Drawings

Attorneys

DORSEY & WHITNEY LLP
1420 Fifth Avenue, Suite 3400
Seattle, Washington 98101
(206) 903-8800

See notes ; attached drawings.

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APPLICATION
Of
Trung T. Doan and Dean A. Klein
For
UNITED STATES LETTERS PATENT
On
**MACHINE STATE STORAGE APPARATUS AND
METHOD**

Docket No. 500966.01
Client/Matter No. 446602-1269
Disclosure No. 01-0193
5 Sheets of Drawings

Attorneys

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REDLINE VERSION 1


Exhibit F